We claim:

1. A method to remove ras-mediated neoplastic cells from a cellular composition suspected of containing such neoplastic cells, which method comprises contacting the cellular composition with reovirus under conditions which results in oncolysis of the ras-mediated neoplastic cells.

2. The method of claim 1 wherein the cellular composition comprises hematopoietic stem cells.

3. The method of claim 2 wherein the hematopoietic stem cells have been harvested from bone marrow.

4. The method of claim 2 wherein the hematopoietic stem cells have been harvested from blood.

5. The method of claim 1 wherein the cellular composition comprises a tissue, an organ or any portion of a tissue or an organ.

6. The method of claim 5 wherein the tissue or organ is selected from the group consisting of liver, kidney, heart, cornea, skin, lung, pancreatic islet cells, and whole blood.

7. The method of claim 5 wherein the tissue, organ or portion of the tissue or organ is useful for transplantation.

8. The method of claim 1 wherein the cellular composition comprises cultured cells, semen or eggs.

9. The method of claim 1 wherein the reovirus is a mammalian reovirus.

10. The method of claim 1 wherein the reovirus is an avian reovirus.

11. The method of claim 9 wherein the mammalian reovirus is a human reovirus.

12. The method of claim 9 wherein the mammalian reovirus is serotype 3 virus.

13. The method of claim 12 wherein the serotype 3 virus is the Dearing strain.

14. The method of claim 1 further comprising the step of freezing and storing the reovirus-treated composition in a solution containing DMSO.

15. The method of claim 1 further comprising the step of treating the reovirus-treated composition with anti-reovirus antibodies and complements.

16. The method of claim 1 further comprising the steps of subjecting the treated cells to a gradient which separates the cells from the reovirus and collecting the layer which contains cells.

17. A method of preparing a cellular composition for transplantation into a recipient, comprising the steps of:

(a) selecting a cellular composition for transplantation; and

(b) contacting the composition with a reovirus under conditions which result in oncolysis of ras-mediated neoplastic cells.

18. The method of claim 17 wherein said transplantation is autologous.

19. The method of claim 17, further comprising the step of administering to the transplant recipient at least one substance selected from the group consisting of an anti-reovirus antibody and/or an immune system stimulating agent.

20. A method of reducing a risk of recurrence of tumor due to transplantation of autologous hematopoietic stem cell suspected of containing ras-mediated neoplastic cells, comprising harvesting from a subject to receive the transplant a cellular composition which comprises hematopoietic stem cells, contacting the cellular composition with a reovirus under conditions which result in oncolysis of ras-mediated neoplastic cells, and introducing the reovirus-treated composition back into the subject.

21. A cellular composition prepared according to the method of claim 1.

22. The composition of claim 21 which is used in transplantation.

23. The composition of claim 22 wherein said transplantation is autologous.

24. The composition of claim 23 wherein said composition comprises hematopoietic stem cells.